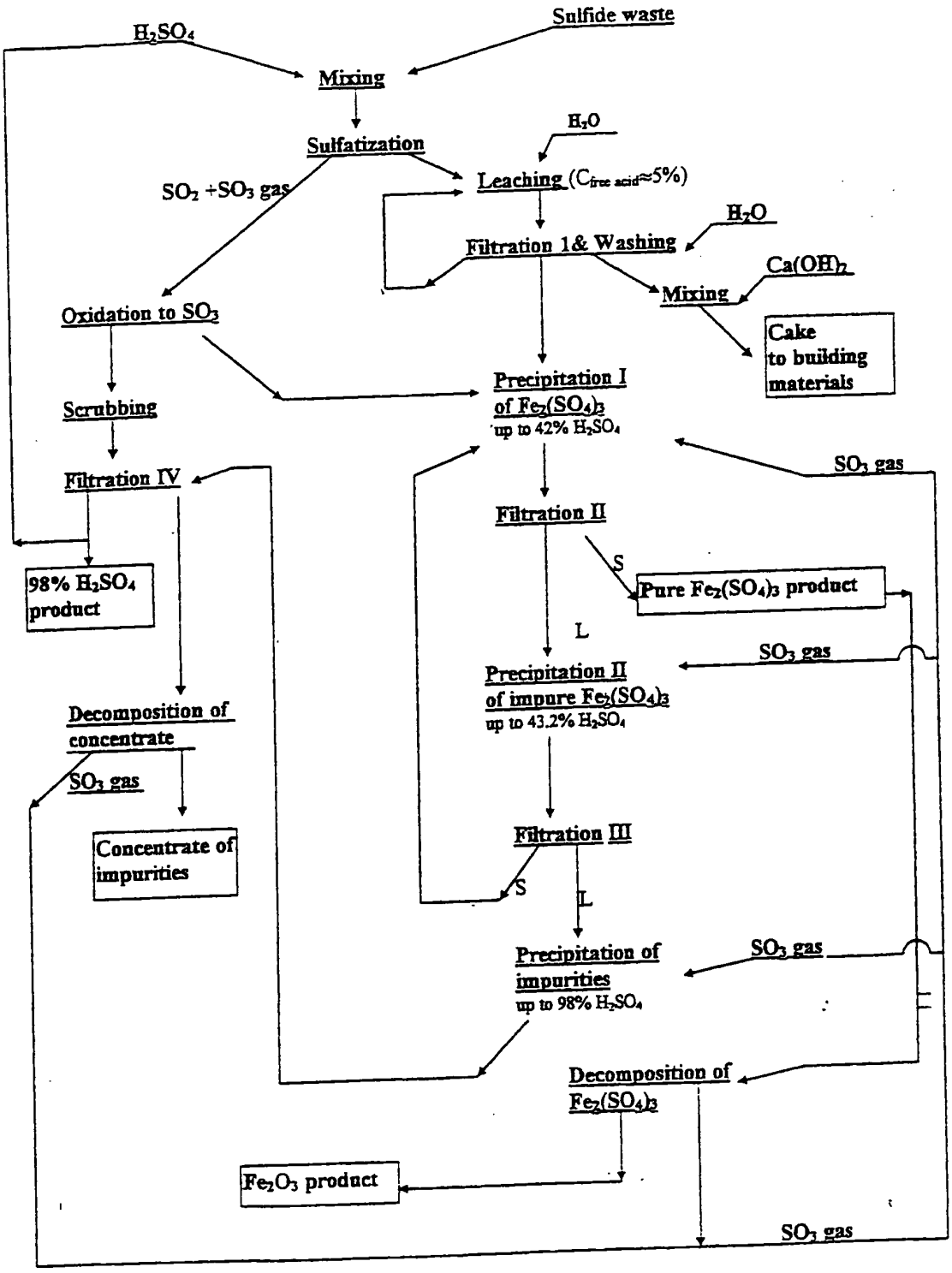
H_2SO_4
Sulfide waste
Mixing
Sulfatization
H_2O
Leaching ($C_{free\ acid}$≈5%)
SO_2 +SO_3 gas
H_2O
Filtration 1& Washing
$Ca(OH)_2$
Mixing
Oxidation to SO_3
Cake to building materials
Precipitation I of $Fe_2(SO_4)_3$ up to 42% H_2SO_4
Scrubbing
SO_3 gas
Filtration IV
Filtration II
S
98% H_2SO_4 product
Pure $Fe_2(SO_4)_3$ product
L
SO_3 gas
Precipitation II of impure $Fe_2(SO_4)_3$ up to 43.2% H_2SO_4
Decomposition of concentrate
SO_3 gas
Concentrate of impurities
Filtration III
S
L
Precipitation of impurities up to 98% H_2SO_4
SO_3 gas
Decomposition of $Fe_2(SO_4)_3$
Fe_2O_3 product
SO_3 gas